

REMARKS

The Office Action of October 29, 2007 has been received and carefully reviewed. It is submitted that, by this Amendment, all bases of rejection and objection are traversed and overcome. Claims 1-11 and 13-19 remain in the application. Claim 12 had been previously cancelled. Reconsideration of the claims is respectfully requested.

Claims 1-11 and 13-19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kabalnov in view of Leender et al.

Applicants' invention as recited in claim 1 relates to a method of enhancing color space including depositing dye-based ink and charged polymer fixer on a print medium in a print zone having a temperature between about 45°C and about 85°C, wherein the deposited dye-based ink has a chroma at least two units greater than dye-based ink deposited on an identical print medium at room temperature.

Kabalnov discloses an aqueous dye-based ink which achieves increased chroma by having a substantial portion of the dye molecules contained in the aqueous internal areas of vesicles, the vesicles having a negative charge. The dye-based ink is printed with a fixer having a positive charge. Formation of the vesicles includes the presence of surfactants or phospholipids with low water solubility, as shown in Kabalnov, columns 7 and 8. Nothing in Kabalnov teaches or suggests the temperature in the system to increase, decrease or be within any particular range. Clearly, Kabalnov does not teach a connection between temperature and chroma.

Leender discloses increasing optical density of ink images by heating within a given temperature range. However, the ink images are achieved with components comprising silver salt, and a "heat solvent", i.e. a non-hydrolyzable organic material which is solid below 50°C. Leender's ink system, based on light-sensitive silver salt, produces black (not colored) images. Such a system is different chemically than the anionic dye-based system of the present application. Furthermore, the concept of chroma would not be used in such a system. The function that heat plays in the

system of Leender, to melt a solid solvent thus activating silver salts, has no analogous function in the system of the present application.

For the above reasons, neither Kabalnov nor Leender taken individually teach or suggest the presently claimed invention. Furthermore, there is no suggestion or motivation in either reference to combine the references. Kabalnov teaches an aqueous colored ink in which the dye in the ink is contained in vesicles to increase chroma. Leender teaches silver salt in combination with an organic “heat solvent” in a black ink which must be heated above 50°C to bring about a reaction and achieve an image. There is no suggestion to use heat in Kabalnov and no suggestion to use either dyes or vesicles in Leender. Furthermore, one trying to combine the two references would be left wondering whether to use a dye system or a silver salt /“heat solvent” system. One skilled in the art would find no reason to combine them. Even if concepts from both Kabalnov and Leender were combined, there would be no reasonable expectation of achieving success with such a combination. Lastly, the claimed recitations of the present application would not be obtained with combined components of this combination.

In responding to the claim recitation “wherein the deposited dye-based ink has a chroma at least two units greater than dye-based ink deposited on an identical print medium at room temperature”, the Examiner makes the following statement in the current office action: “[C]hroma is a color of the ink, and the color of ink varies with the temperature, higher the temperature is darker the color (chroma) of the ink.”

The Examiner appears to be relying on “common knowledge” in the above statement. Clearly, neither Kabalnov nor Leender, the presently cited references in this application, demonstrate the alleged principle about the relationship of heat and color in ink that is being stated above. As stated in MPEP §2144.03(A), “Official notice unsupported by documentary evidence should only be taken by the examiner where the facts asserted to be well-known, or to be common knowledge in the art are capable of instant and unquestionable demonstration as being well-known.”

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In this instance, the Examiner's assertions about the relation of heat and color in ink are clearly not capable of instant and unquestionable demonstration as being well-known.

In fact, the inventor of the present application, Yi-Hua Tsao, has provided data which demonstrates that there is no general detectable relationship between heat and color in ink. The data and her sworn and executed statement about the data are given in a Declaration under Rule 132 attached to this amendment.

As such, it is submitted that Applicants' invention as defined in independent claims 1, 9 and 16, and in those claims depending ultimately therefrom, is not anticipated, taught or rendered obvious by Kabalnov or Leenders, either alone or in combination, and patentably defines over the art of record.

In summary, claims 1-11 and 13-19 remain in the application. It is submitted that, through this Amendment, Applicants' invention as set forth in these claims is now in a condition suitable for allowance.

Further and favorable consideration is requested. If the Examiner believes it would expedite prosecution of the above-identified application, the Examiner is cordially invited to contact Applicants' Attorney at the below-listed telephone number.

Respectfully submitted,

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